

Monitoring of seabirds in the Polish Baltic Sea Exclusive Economic Zone

Włodzimierz Meissner

Ornithology Unit

Department of Vertebrate Ecology and Zoology

University of Gdańsk



**University
of Gdańsk**



Katedra Ekologii i Zoologii Kręgowców

Tomasz Chodkiewicz

Museum and Institute of Zoology PAS

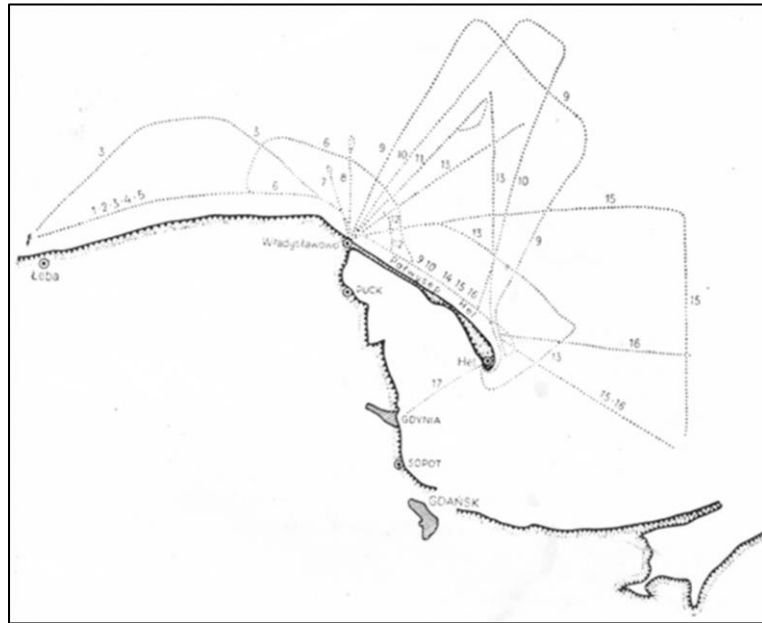
&

Polish Society for the Protection of Birds (OTOP)



History of bird studies in the Polish Baltic Sea Exclusive Economic Zone

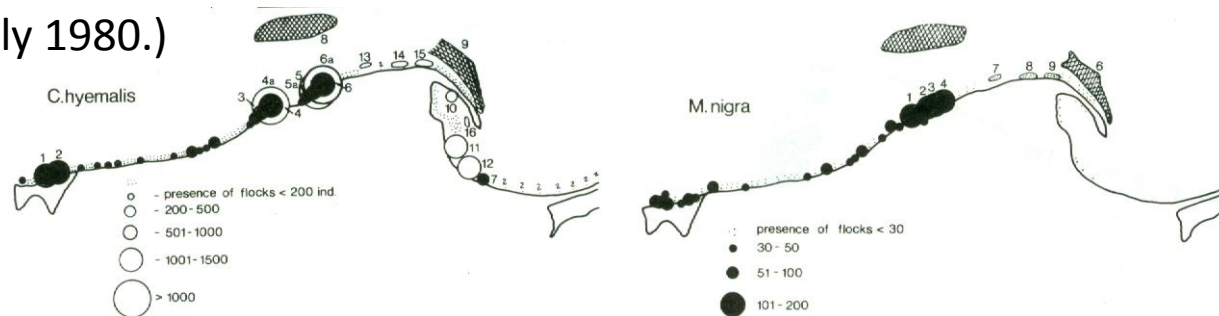
Stanisław Manikowski - irregular ship surveys between 1961 and 1966



Non-standardised counting methods

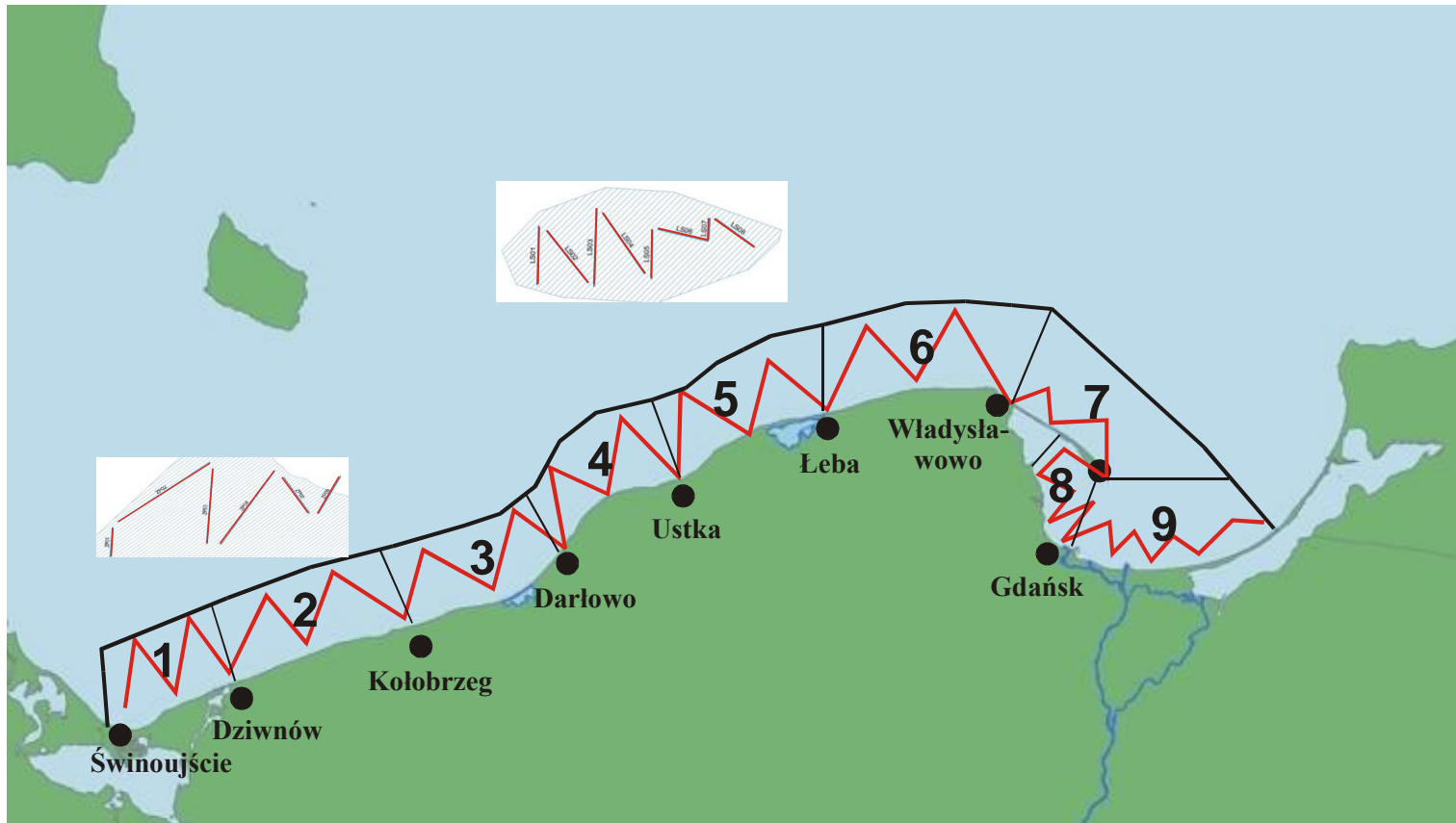
These data cannot be directly compared with the results of the counts conducted today

Stefan Strawiński (late 1960.- early 1980.)



History of bird studies in the Polish Baltic Sea Exclusive Economic Zone

First large-scale study using modern methods: 2004/2005



Wintering Sea Bird Survey conducted since 2011

- commissioned by the Chief Inspectorate of Environmental Protection as a component of the State Environmental Monitoring
- organized by The Polish Society for the Protection of Birds (OTOP)

Mid-winter ship survey using the standard ship transect method

The transect layout is the same as in winter 2004/2005

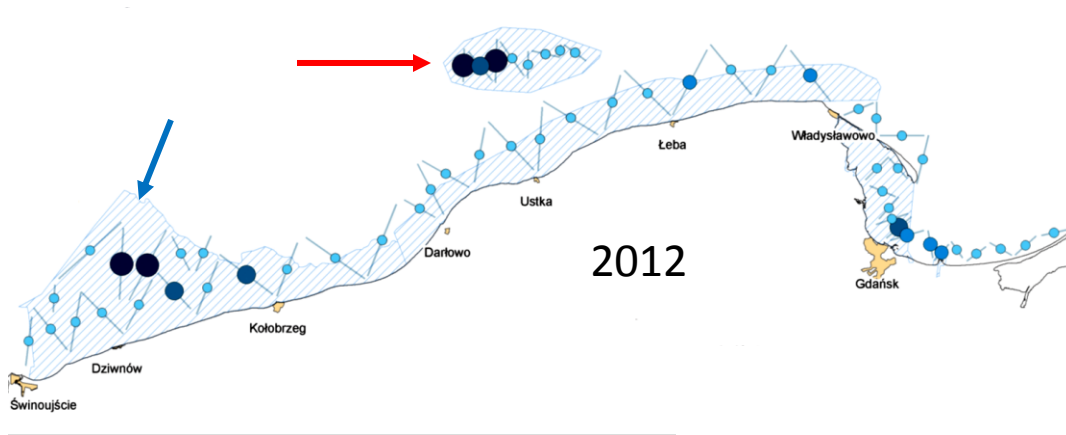
Today the database contains complete data from 13 seasons

Data collected for offshore wind farms will be available in a few years' time

Distribution maps: Long-tailed Duck



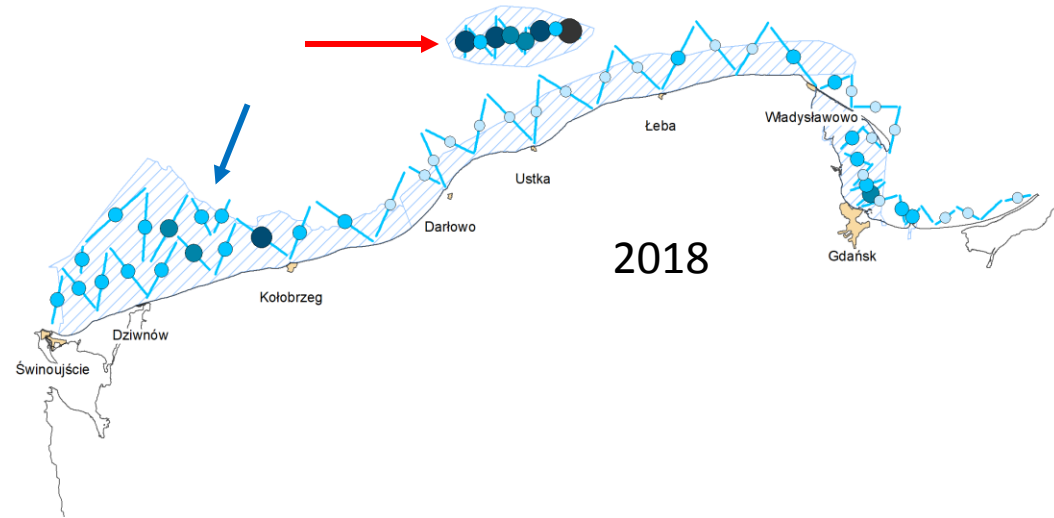
Estimated number of birds wintering in the Polish Baltic zone
400 000 ind.



2012

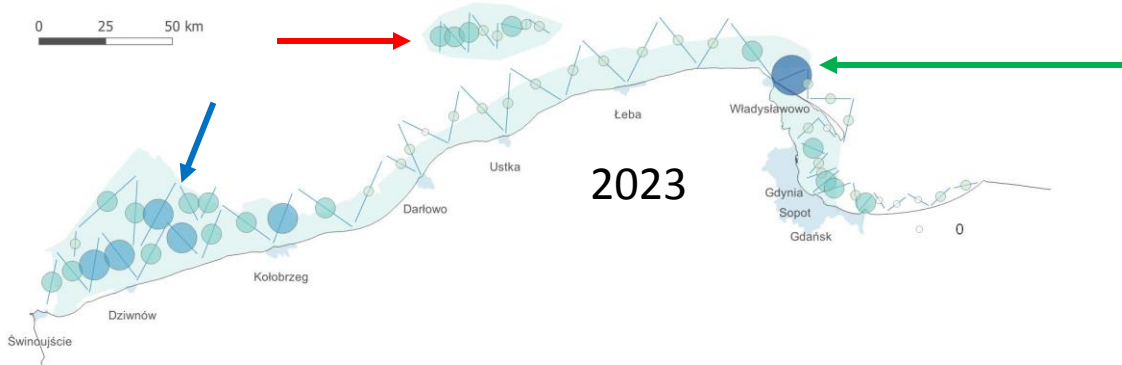
Słupsk Bank

Pomeranian Bay



2018

0 25 50 km

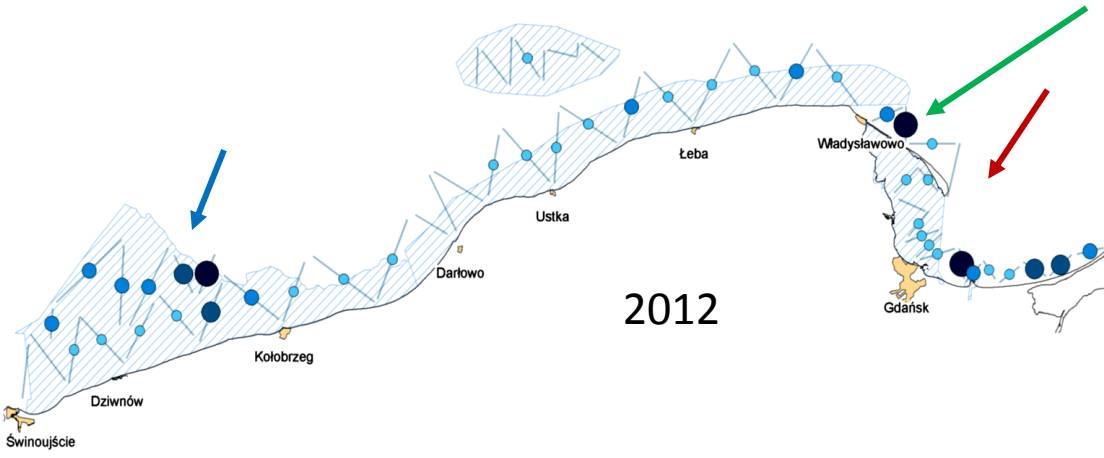


2023

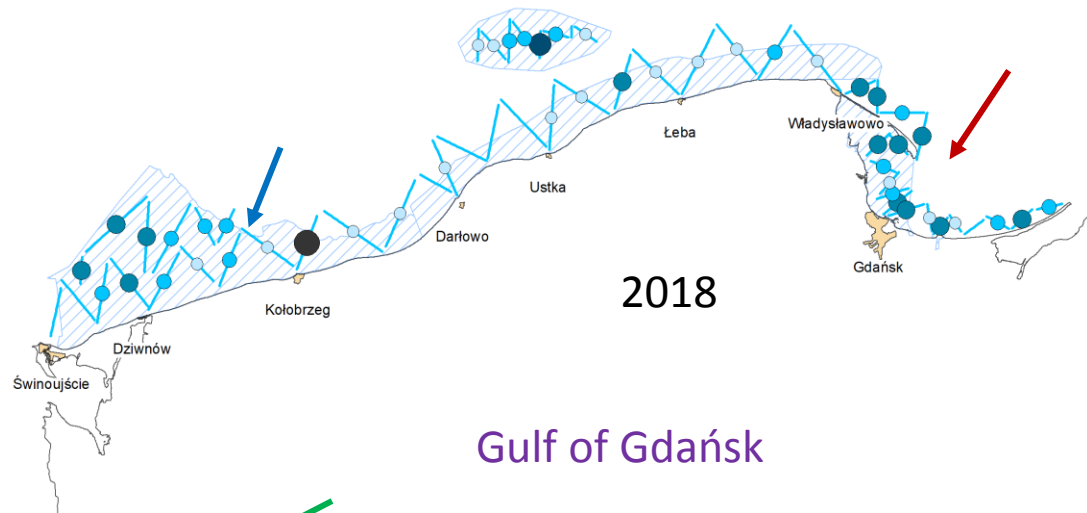
Distribution maps: Velvet Scoter



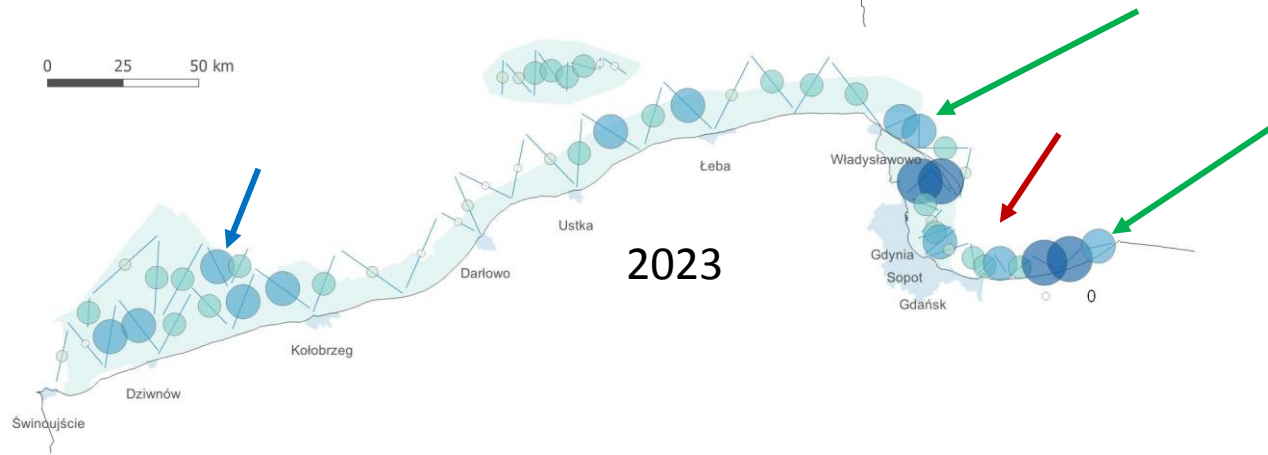
Estimated number of birds wintering in the Polish Baltic zone
300 000 ind.



Pomeranian Bay



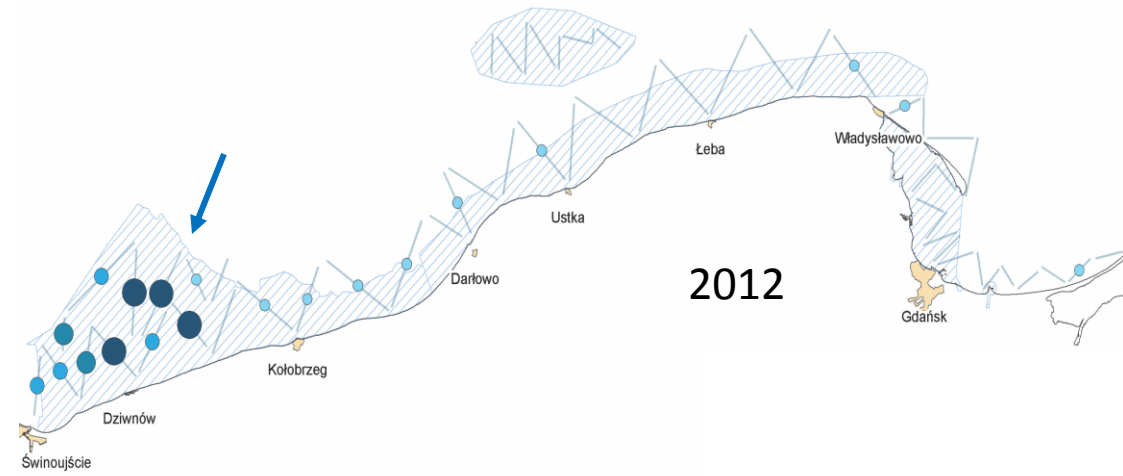
Gulf of Gdańsk



Distribution maps: Common Scoter

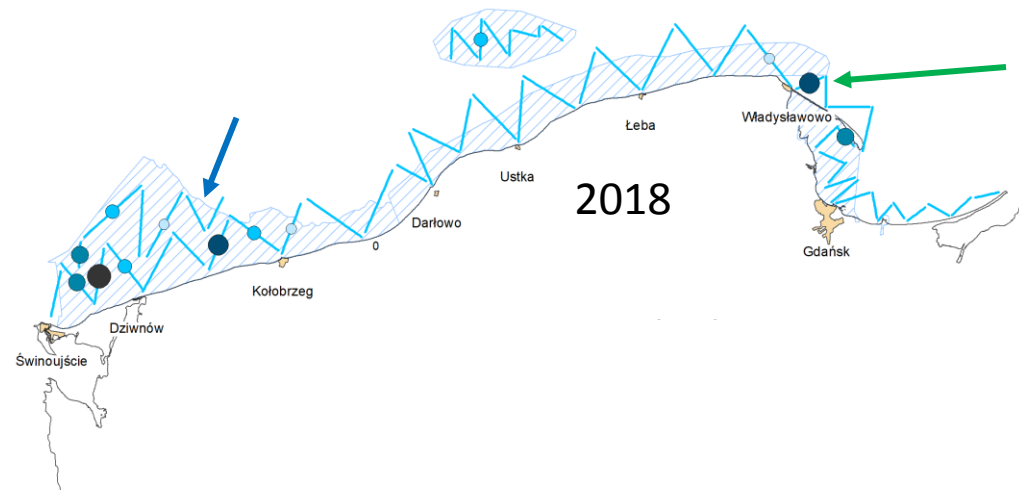


Estimated number of birds wintering in the Polish Baltic zone
45 000 ind.



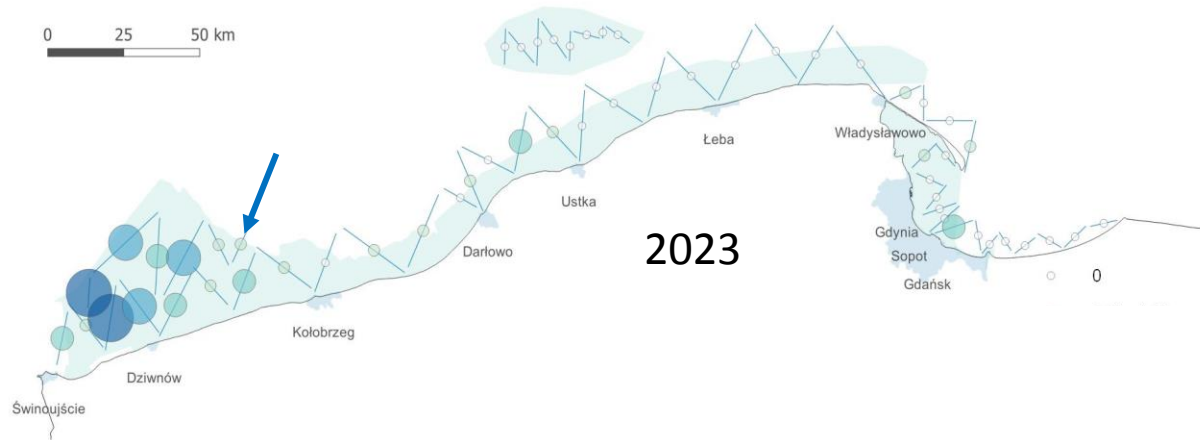
2012

Pomeranian Bay



2018

0 25 50 km

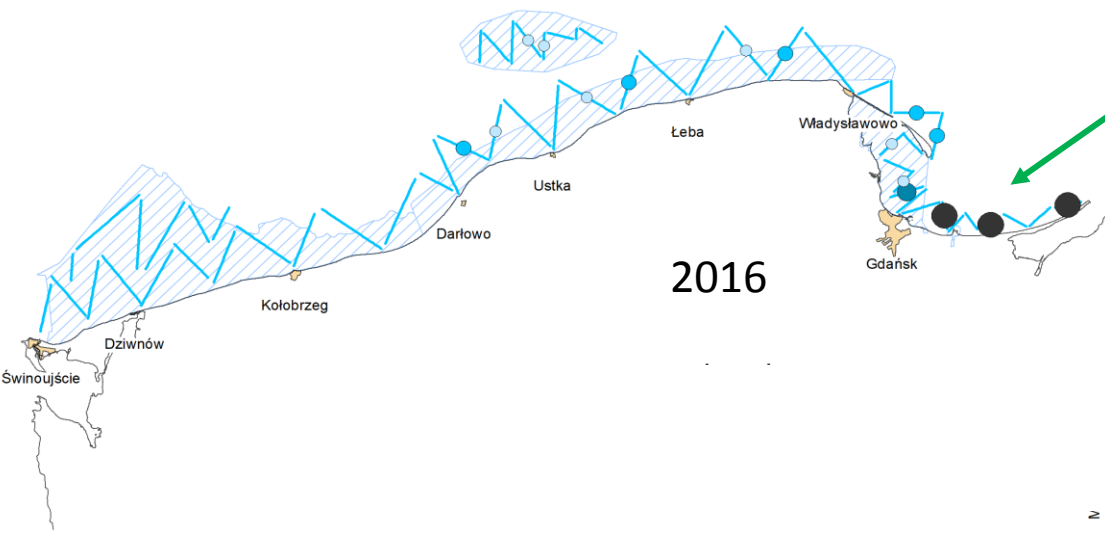


2023

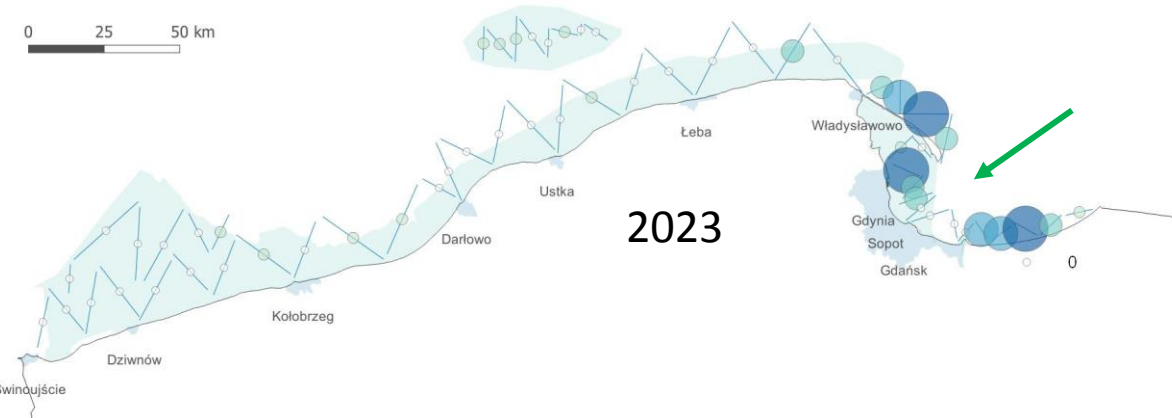
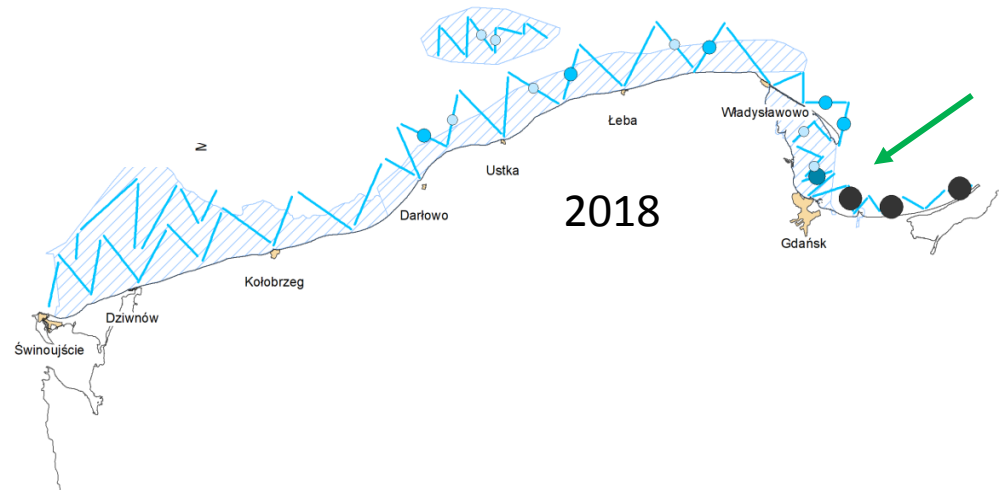
Distribution maps: Razorbill



Estimated number of birds wintering in the Polish Baltic zone
2 000 ind.

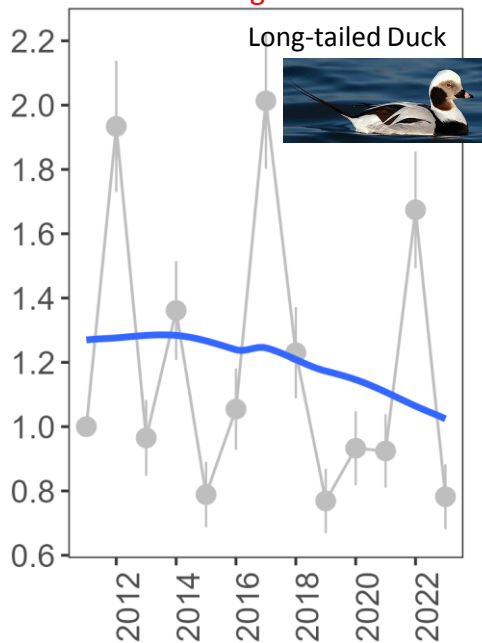


Gulf of Gdańsk

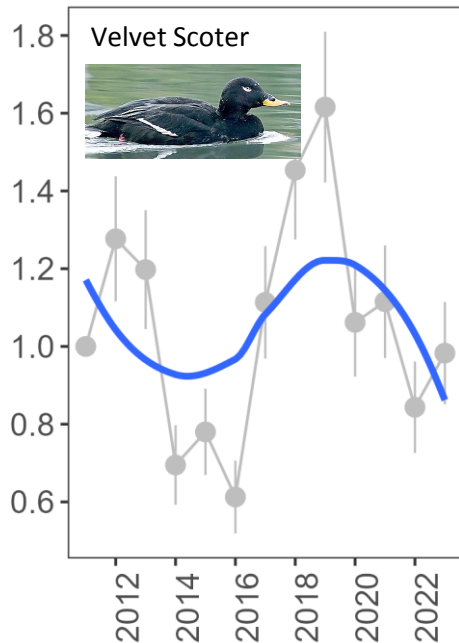


Trends (2011-2023)

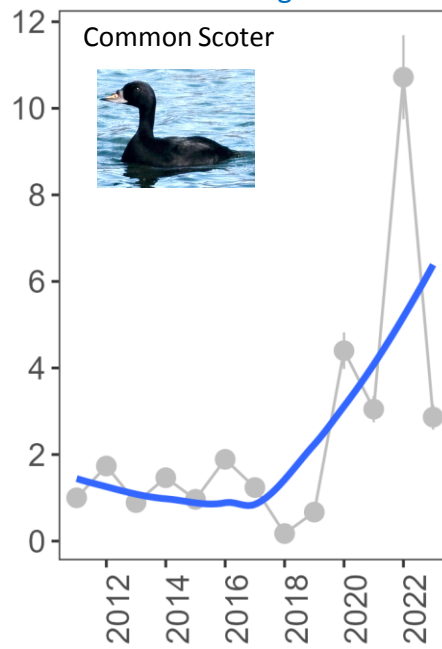
$\lambda = 0.78$ slight decrease



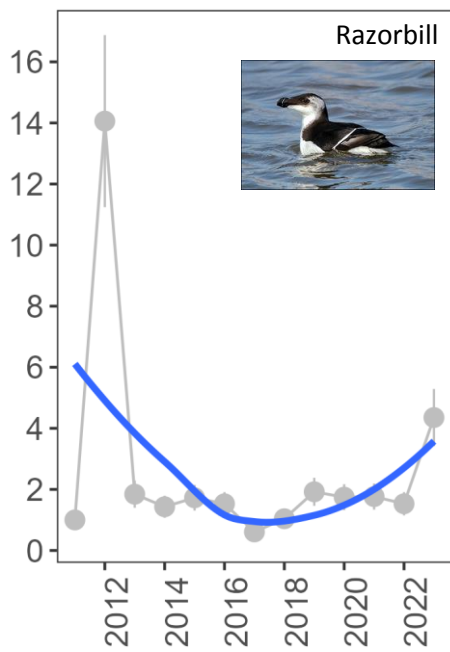
$\lambda = 0.98$ stable



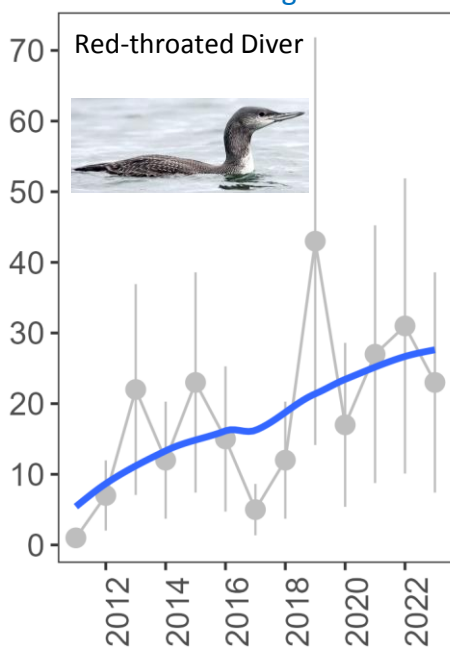
$\lambda = 2.86$ strong increase



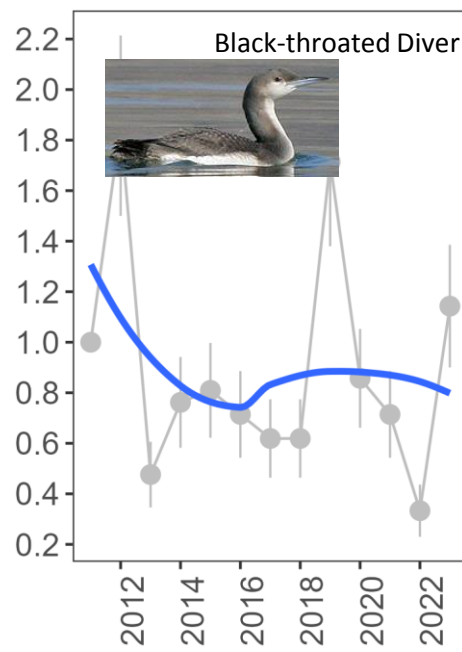
$\lambda = 0.93$ stable



$\lambda = 15.5$ strong increase



$\lambda = 0.98$ uncertain



Conclusions

- Wintering Sea Bird Survey provides good quality data on the distribution and changes in numbers of seabirds on the most important wintering grounds in the Polish Baltic zone
- Our knowledge of seabirds in the Polish Baltic zone has been growing rapidly since the introduction of this monitoring scheme
- We are able to track changes in the number and distribution of different species, which can give us arguments towards better protection of seabirds

Acknowledgements

We would like to thank to all colleagues taking part in birds surveys

MAREA company has provided us with invaluable organisational and financial assistance in 2023

